6560-50-P

#### ENVIRONMENTAL PROTECTION AGENCY

#### **40 CFR Part 52**

[EPA-R10-OAR-2018-0823, FRL-9994-48-Region 10]

Air Plan Approval; AK: Interstate Transport Requirements for the 2015 Ozone Standard

AGENCY: Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

SUMMARY: The Clean Air Act requires each State Implementation Plan (SIP) to contain adequate provisions prohibiting emissions that will have certain adverse air quality effects in other states. On October 25, 2018, the State of Alaska made a submission to the Environmental Protection Agency (EPA) to address these requirements for the 2015 ozone National Ambient Air Quality Standards (NAAQS). The EPA is proposing to approve the Alaska SIP as meeting the requirement that each SIP contain adequate provisions to prohibit emissions that will significantly contribute to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in any other state.

DATES: Comments must be received on or before [insert date 30 days after date of publication in the <u>Federal Register</u>].

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R10-OAR-2018-0823, at https://www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. The EPA may publish any comment received to its public docket. Do not electronically submit any information you consider to be Confidential Business Information (CBI) or other information the disclosure of

which is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit https://www.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION, CONTACT: Kristin Hall, EPA Region 10, Air and Radiation Division, 1200 Sixth Avenue, Seattle WA, 98101, at (206) 553-6357 or

**SUPPLEMENTARY INFORMATION:** Throughout this document wherever "we," "us," or "our" is used, it means the EPA.

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# I. Background

On October 1, 2015, the EPA promulgated a revision to the ozone NAAQS (2015 ozone NAAQS), lowering the level of both the primary and secondary standards to 0.070 parts per million (ppm). Section 110(a)(1) of the Clean Air Act (CAA) requires states to submit, within

<sup>1</sup> See National Ambient Air Quality Standards for Ozone, Final Rule, 80 FR 65292 (October 26, 2015). Although the level of the standard is specified in the units of ppm, ozone concentrations are also described in parts per billion (ppb). For example, 0.070 ppm is equivalent to 70 ppb.

three years after promulgation of a new or revised standard, SIPs meeting the applicable requirements of section 110(a)(2).<sup>2</sup> One of these applicable requirements is found in section 110(a)(2)(D)(i), otherwise known as the good neighbor provision, which generally requires SIPs to contain adequate provisions to prohibit in-state emissions activities from having certain adverse air quality effects on other states due to interstate transport of pollution. There are four so-called "prongs" within CAA section 110(a)(2)(D)(i): section 110(a)(2)(D)(i)(I) contains prongs 1 and 2, while section 110(a)(2)(D)(i)(II) includes prongs 3 and 4. This action addresses the first two prongs under section 110(a)(2)(D)(i)(I). Under prongs 1 and 2 of the good neighbor provision, a SIP for a new or revised NAAQS must contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting air pollutants in amounts that will significantly contribute to nonattainment of the NAAQS in another state (prong 1) or that will interfere with maintenance of the NAAQS in another state (prong 2). Under section 110(a)(2)(D)(i)(I) of the CAA, the EPA and states must give independent significance to prong 1 and prong 2 when evaluating downwind air quality problems.<sup>3</sup>

Regional Regulatory Actions

The EPA has addressed the interstate transport requirements of CAA section 110(a)(2)(D)(i)(I) prongs 1 and 2 with respect to prior ozone NAAQS in several regional regulatory actions, including the Cross-State Air Pollution Rule (CSAPR), which addressed interstate transport for purposes of the 1997 ozone NAAQS (as well as the 1997 and 2006 fine

<sup>2</sup> SIP revisions that are intended to meet the applicable requirements of section 110(a)(1) and (2) of the CAA are often referred to as infrastructure SIPs and the applicable elements under 110(a)(2) are referred to as infrastructure requirements.

<sup>&</sup>lt;sup>3</sup> See North Carolina v. EPA, 531 F.3d 896, 909-911 (2008).

particulate matter standards) and the Cross-State Air Pollution Rule Update, which addressed interstate transport for purposes of the 2008 ozone NAAQS (CSAPR Update). CSAPR and the CSAPR Update did not address interstate transport for the 2015 ozone NAAQS and also made no specific findings with respect to Alaska. Alaska is not part of the contiguous United States and is not fully contained within the 12 kilometer (km) eastern modeling domain established to inform CSAPR and the CSAPR Update. The 12 km eastern modeling domain identified the Western United States (the West) as the 11 western contiguous states of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. The Eastern United States (the East) was identified as the 37 states east of the 11 western states.

# Four-Step Framework

The EPA, working in partnership with states to develop and implement CSAPR, the CSAPR Update, and previous regional rulemakings pursuant to the good neighbor provision,<sup>5</sup> developed the following four-step framework to address the requirements of the good neighbor provision for the ozone NAAQS:<sup>6</sup> (1) identify downwind air quality problems; (2) identify upwind states that impact those downwind air quality problems sufficiently such that they are considered "linked" and therefore warrant further review and analysis; (3) identify the emissions reductions necessary (if any), considering cost and air quality factors, to prevent linked upwind states identified in step 2 from contributing significantly to nonattainment or interfering with maintenance of the NAAQS at the locations of the downwind air quality problems; and (4) adopt

 $<sup>^4</sup>$  See 76 FR 48208 (August 8, 2011) (i.e., CSAPR) and 81 FR 74504 (October 26, 2016) (i.e., CSAPR Update).

 $<sup>^{5}</sup>$  Other regional rulemakings addressing ozone transport include the NO<sub>x</sub> SIP Call, 63 FR 57356 (October 27, 1998), and the Clean Air Interstate Rule (CAIR), 70 FR 25162 (May 12, 2005).

<sup>&</sup>lt;sup>6</sup> The four-step framework has also been used to address requirements of the good neighbor provision for some previous particulate matter and ozone NAAQS, including in the western United States. See, e.g., 83 FR 30380 (June 28, 2018) and 83 FR 5375, 5376-77 (February 7, 2018).

permanent and enforceable measures needed to achieve those emissions reductions.

#### Data to Assist States

To assist states, the EPA released several documents containing information relevant to evaluating interstate transport with respect to the 2015 ozone NAAQS, and we describe those documents in the following sections. However, none of these documents consider ozone precursor emissions to or from Alaska, and none project design values at monitoring sites located in Alaska, nor apportion specific downwind impacts to Alaska. Nonetheless, we have included all background information to provide a complete accounting of the EPA's data releases.

#### 2017 Data Release and Memorandum

On January 6, 2017, the EPA published a notice of data availability (NODA) for preliminary interstate ozone transport modeling with projected ozone design values for 2023, on which we requested comment.<sup>7</sup> The year 2023 was used as the analytic year for this preliminary modeling because that year aligns with the expected attainment year for ozone nonattainment areas classified as Moderate.<sup>8</sup> On October 27, 2017, we released a memorandum (2017 memorandum) containing updated modeling data for 2023, which incorporated changes made in response to comments on the NODA.<sup>9</sup> Although the 2017 memorandum also released data for a 2023 modeling year, we specifically stated that the modeling may be useful for states developing SIPs to address remaining good neighbor obligations for the 2008 ozone NAAQS but did not

<sup>&</sup>lt;sup>7</sup> See Notice of Availability of the Environmental Protection Agency's Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone National Ambient Air Quality Standard (NAAQS), 82 FR 1733 (January 6, 2017).

<sup>&</sup>lt;sup>8</sup> 82 FR 1735 (January 6, 2017).

<sup>&</sup>lt;sup>9</sup> See Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I), October 27, 2017, available in the docket for this action or at https://www.epa.gov/interstate-air-pollution-transport/interstate-air-pollution-transport-memos-and-notices.

address the 2015 ozone NAAQS.

2018 Data Release and Memoranda

On March 27, 2018, we issued a memorandum (March 2018 memorandum) indicating the same 2023 modeling data released in the 2017 memorandum would also be useful for evaluating potential downwind air quality problems with respect to the 2015 ozone NAAQS (step 1 of the four-step framework). The March 2018 memorandum included newly available contribution modeling results to assist states in evaluating their impact on potential downwind air quality problems (step 2 of the four-step framework) as part of efforts to develop good neighbor SIPs for the 2015 ozone NAAQS. The EPA subsequently issued two more memoranda in August and October of 2018, providing guidance to states developing good neighbor SIPs for the 2015 ozone NAAQS concerning, respectively, potential contribution thresholds that may be appropriate to apply in step 2 and considerations for identifying downwind areas that may have problems maintaining the standard (under prong 2 of the good neighbor provision) at step 1 of the four-step framework. The standard (under prong 2 of the good neighbor provision) at step 1 of the four-step framework.

March 2018 Memorandum

The March 2018 memorandum describes the process and results of the updated photochemical and source-apportionment modeling used to project ambient ozone concentrations

<sup>10</sup> See Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I), March 27, 2018, available in the docket for this action and at https://www.epa.gov/interstate-air-pollution-transport/interstate-air-pollution-transport-memos-and-notices.

<sup>11</sup> See Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards, August 31, 2018) ("August 2018 memorandum"), and Considerations for Identifying Maintenance Receptors for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards, October 19, 2018, available in the docket for this action and at https://www.epa.gov/airmarkets/memo-and-supplemental-information-regarding-interstate-transport-sips-2015-ozone-naags.

for the year 2023 and the state-by-state impacts on those concentrations. The March 2018 memorandum also explains that the selection of the 2023 analytic year aligns with the 2015 ozone NAAQS attainment year for Moderate nonattainment areas. As described in more detail in the 2017 and March 2018 memoranda, the EPA used the Comprehensive Air Quality Model with Extensions (CAMx version 6.40) to model average and maximum design values in 2023 to identify potential nonattainment and maintenance receptors (i.e., monitoring sites that are projected to have problems attaining or maintaining the 2015 ozone NAAQS). The March 2018 memorandum presents design values calculated in two ways. First, the EPA followed its past approach<sup>12</sup> of using model predictions from the 3 x 3 array of grid cells surrounding the location of all monitoring sites (referred to as the "3 x 3" approach). Second, the EPA followed a modified approach for coastal monitoring sites in which "overwater" modeling data were not included in the calculation of future year design values (referred to as the "no water" approach).

For purposes of identifying potential nonattainment and maintenance receptors in 2023, the EPA applied the same approach used in the CSAPR Update, wherein the EPA considered a combination of monitoring data and modeling projections to identify monitoring sites that are projected to have problems attaining or maintaining the NAAQS. Specifically, the EPA identified nonattainment receptors as those monitoring sites with current measured values <sup>13</sup> exceeding the NAAQS that also have projected (i.e., in 2023) average design values exceeding the NAAQS. The EPA identified maintenance receptors as those monitoring sites with maximum design values exceeding the NAAQS. This included sites with current measured values below

<sup>12</sup> See March 2018 memorandum, p. 4

 $<sup>^{13}</sup>$  The EPA used 2016 ozone design values, based on 2014 through 2016 measured data, which were the most current data at the time of the analysis. See attachment B of the March 2018 memorandum, p. B-1.

the NAAQS with projected average and maximum design values exceeding the NAAQS, and monitoring sites with projected average design values below the NAAQS but with projected maximum design values exceeding the NAAQS. The EPA included the design values and monitoring data for all monitoring sites projected to be potential nonattainment or maintenance receptors based on the updated 2023 modeling in attachment B to the March 2018 memorandum.

After identifying potential downwind nonattainment and maintenance receptors, the EPA next performed state-level ozone source-apportionment modeling for the 48 contiguous United States and the District of Columbia to estimate the expected impact from each state to each nonattainment and maintenance receptor. The EPA included contribution information resulting from the source-apportionment modeling in attachment C to the March 2018 memorandum. For more specific information on the modeling and analysis, please see the 2017 and March 2018 memoranda, the NODA for the preliminary interstate transport assessment, and the supporting technical documents included in the docket for this action.

In the CSAPR and the CSAPR Update, the EPA used a threshold of 1 percent of the NAAQS to determine whether a given upwind state was "linked" at step 2 of the four-step framework and would therefore contribute to downwind nonattainment and maintenance sites identified in step 1. If a state's impact did not exceed the 1 percent threshold, the upwind state was not "linked" to a downwind air quality problem, and the EPA therefore concluded the state will not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in the downwind states. However, if a state's impact exceeded the 1 percent threshold, the state's

<sup>&</sup>lt;sup>14</sup> As discussed in the March 2018 memorandum, the EPA performed source-apportionment model runs for a modeling domain that covers the 48 contiguous United States and the District of Columbia, and adjacent portions of Canada and Mexico.

emissions were further evaluated in step three, taking into account both air quality and cost considerations, to determine what, if any, emissions reductions might be necessary to address the good neighbor provision.

August and October 2018 Memoranda

As noted previously, on August 31, 2018, the EPA issued a memorandum (the August 2018 memorandum) providing information concerning potential contribution thresholds that may be appropriate to apply with respect to the 2015 ozone NAAQS in step 2. Consistent with the process for selecting the 1 percent threshold in CSAPR and the CSAPR Update, the memorandum included analytical information regarding the degree to which potential air quality thresholds would capture the collective amount of upwind contribution from upwind states to downwind receptors for the 2015 ozone NAAQS. The August 2018 memorandum indicated that, based on the EPA's analysis of its most recent modeling data, the amount of upwind collective contribution captured using a 1 part per billion (ppb) threshold is generally comparable, overall, to the amount captured using a threshold equivalent to 1 percent of the 2015 ozone NAAOS. Accordingly, the EPA indicated that it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an alternative to the 1 percent threshold, at step 2 of the four-step framework in developing their SIP revisions addressing the good neighbor provision for the 2015 ozone NAAOS. 15 In addition, on October 19, 2018, the EPA issued a memorandum presenting information that states may consider as they evaluate the status of monitoring sites that the EPA identified as potential maintenance receptors.

While the March 2018 memorandum presented information regarding the EPA's latest

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<sup>&</sup>lt;sup>15</sup> See August 2018 memorandum, p. 4.

analysis of ozone transport following the approaches the EPA has taken in prior regional rulemaking actions, the EPA has not made any final determinations regarding how states should identify downwind receptors with respect to the 2015 ozone NAAQS at step 1 of the four-step framework. Rather, the EPA noted that states have flexibility in developing their own SIPs to follow different analytical approaches than the EPA's, so long as their chosen approach has an adequate technical justification and is consistent with the requirements of the CAA.

#### II. State Submission

On October 25, 2018, the Alaska Department of Environmental Conservation (ADEC) made a submission addressing the requirements of CAA section 110(a)(2)(D)(i)(I) prongs 1 and 2 for the 2015 ozone NAAQS. <sup>16</sup> The submission provides information supporting the state's conclusion that emissions from Alaska do not significantly contribute to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in any other state. The submission focuses on the amount and sources of ozone precursor emissions in the state, trends in monitored ambient ozone levels, meteorological conditions, the distance from Alaska to the nearest receptors in other states, and the intervening geography that isolates Alaska from other states.

The submission states that aggregate anthropogenic ozone precursor emissions (nitrogen oxides (NOx) and volatile organic compounds (VOCs)) from Alaska sources are very small compared to emissions of ozone precursors on a nationwide basis. Specifically, Alaska evaluated 2014 National Emissions Inventory data and determined that anthropogenic NOx emissions from

future actions.

<sup>&</sup>lt;sup>16</sup> Alaska's October 25, 2018 submission addresses all CAA sections 110(a)(1) and (2) infrastructure requirements for the 2015 ozone NAAQS (including interstate transport prongs 1 and 2) and includes regulatory updates and permitting rule revisions for approval into the SIP. This action addresses the portion of the submission related to interstate transport prongs 1 and 2. We intend to address the remainder of the submission in separate,

sources in Alaska make up one percent of the national total anthropogenic NOx emissions inventoried. In doing the same comparison for VOCs, Alaska determined that anthropogenic emissions from Alaska sources make up less than one-half percent of total anthropogenic VOC emissions nationwide.

Alaska also included information on monitored ozone levels within the state. ADEC has historically monitored ozone at numerous sites in and around Anchorage and Fairbanks, the two most-populated areas. The submission states that the single highest 8-hour ozone concentration in Alaska was recorded at 0.057 ppm on May 11, 2014 at the Fairbanks National Core (NCORE) site, which is still well below the 2015 ozone standard of 0.070 ppm. The most recent locations for ozone monitoring in Alaska are the Fairbanks National Core site and the Palmer site in the Anchorage area, both of which have 2015 through 2017 design values less than 85 percent of the 2015 ozone NAAQS. The 2015 through 2017 design value at the Fairbanks NCore site is 0.043 ppm and the 2015 through 2017 design value at the Palmer site is 0.044 ppm. The submission asserts that ambient ozone measured in Alaska consistently trends very low.

The submission highlights the geographic isolation of the State of Alaska. Alaska borders no other state in the United States and the intervening geography between Alaska and any other state is significant. The southernmost Alaskan border is geographically separated from the nearest state, Washington, by hundreds of miles of mountainous terrain in British Columbia, Canada. The submission also describes meteorological factors that influence potential interstate transport from Alaska sources. In the summer months, regional, predominant low-pressure wind patterns emanate from the Gulf of Alaska in the west and travel inland towards the east,

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<sup>&</sup>lt;sup>17</sup> Design values below 85 percent of the NAAQS are a factor in determining the EPA's minimum ozone monitoring requirements in 40 CFR part 58, Appendix D.

circulating in a counterclockwise direction. The submission states these predominant lowpressure wind patterns would not generally be expected to transport air pollutants from Alaska south to the contiguous United States.

Alaska's submission points generally to SIP-approved regulations that implement the 2015 ozone NAAQS. The submission highlights Alaska's SIP-approved stationary source preconstruction permitting program set forth in Articles 3 and 5 of Alaska Administrative Code Title 18, Environmental Conservation, Chapter 50, Air Quality Control (18 AAC 50). Alaska's preconstruction permitting program is designed to control future potential NOx and VOC emissions from major and minor stationary sources in the state. The submission also notes other SIP-approved rules that serve to limit NOx and VOCs, including incinerator emission standards, emission limits for industrial processes, and emission limits for fuel burning equipment.

# **III.** EPA Evaluation

We have employed the four-step interstate transport framework to evaluate whether the Alaska SIP meets the requirements of the good neighbor provision for the 2015 ozone NAAQS. At step 1, we refer to the EPA's March 2018 memorandum to identify downwind air quality problems. This memo lists receptors at specific monitoring sites that are projected to have problems attaining or maintaining the 2015 ozone NAAQS. Specifically, the EPA identified nonattainment receptors as those monitoring sites with 2014 through 2016 measured design values exceeding the NAAQS that also have projected average 2023 design values that exceed the NAAQS. The EPA identified maintenance receptors as those monitoring sites with maximum projected 2023 design values exceeding the NAAQS. This includes sites with 2014 through 2016 measured design values below the NAAQS with projected average and maximum design values

exceeding the NAAQS, and monitoring sites with projected average design values below the NAAQS but with projected maximum design values exceeding the NAAQS. Receptors identified by the EPA are in the states of Arizona, California, Colorado, Connecticut, Maryland, Michigan, New York, Texas, and Wisconsin.<sup>18</sup>

While the EPA's March 2018 memorandum helps to identify potential downwind receptors in step 1, it does not inform whether Alaska is sufficiently linked to those receptors, as is required in step 2 of the EPA's four-step framework. The EPA did not include Alaska in the state-level ozone source-apportionment modeling that estimated the expected impact from each state to each nonattainment and maintenance receptor.<sup>19</sup>

In the absence of such modeling and state level source apportionment data at step 2, we have used a "weight of evidence" approach to evaluate factors that together help determine whether Alaska emissions are sufficiently linked to potential nonattainment or maintenance receptors in other states. The factors evaluated for purposes of this proposed action include emissions inventory data, monitoring trends, geography, meteorology, and SIP-approved provisions that limit current and future emissions of ozone precursors, as described in the following paragraphs.

#### Emissions Inventory Data

According to the most recent, publicly-available census data, Alaska's population is less than a million people (737,438).<sup>20</sup> Stationary and mobile source emissions are related, in part, to an area's population. As stated in the submission, and confirmed by 2014 National Emissions

<sup>&</sup>lt;sup>18</sup> See March 2018 memorandum, attachment B.

<sup>19</sup> See March 2018 memorandum, attachment C.

<sup>&</sup>lt;sup>20</sup> United States Census Bureau population estimate for Alaska, July 1, 2018, published at: https://www.census.gov/quickfacts/fact/table/ak,US/PST045218.

Inventory data, Alaska's stationary and mobile source emissions of NOx and VOCs as precursors to ozone formation comprise a very small fraction of emissions nationwide, totaling just one percent and one-half percent, respectively.<sup>21</sup> Compared to other states in the northwest, Alaska's NOx emissions are in the middle of the range, while Alaska's VOC emissions are low.

Table 1: 2014 NEI Stationary and Mobile Source NOx and VOC Emissions (tons)<sup>22</sup>

Pollutant	Nationwide	Alaska	Idaho	Oregon	Washington
NOx	12,233,224	127,194	81,135	125,626	234,050
VOCs	12,388,288	63,408	86,332	134,431	241,561

# Monitoring Trends

In addition to emissions inventory data, we have evaluated historic ozone monitoring data within Alaska. ADEC has monitored ozone in Anchorage and Fairbanks over the last 10 years. The National Park Service also monitors for ozone at Denali National Park.<sup>23</sup> Minimum monitoring requirements for ozone are established in 40 CFR part 58, Appendix D, and make use of population data and design value history to determine the minimum number of ozone monitors that are required in areas of each state.<sup>24</sup> The following table shows ozone design values calculated from 2010 to the present. All are well below the 2015 ozone NAAQS (0.070 ppm).

Table 2: Alaska Ozone Design Value Trends (ppm)<sup>25</sup>

Site ID	Location	2010 -	2011 –	2012 –	2013 –	2014 –	2015 –
		2012	2013	2014	2015	2016	2017
020200018	Anchorage, Garden	0.045	_	_	_	_	_

<sup>&</sup>lt;sup>21</sup> "Biogenic sources" and "Fire sources" are not included. See EPA 2014 National Emissions Inventory Report, published at https://gispub.epa.gov/neireport/2014/.

<sup>23</sup> Clean Air Status and Trends Network (CASTNET).

<sup>&</sup>lt;sup>22</sup> Ibid.

<sup>&</sup>lt;sup>24</sup> 40 CFR part 58, Appendix D, Network Design Criteria for Ambient Air Quality Monitoring, Table D-2. The 2018 Alaska monitoring network plan was approved by the EPA on October 19, 2018. The EPA approval letter is in the docket for this action.

<sup>&</sup>lt;sup>25</sup> EPA 2017 Ozone Design Value Report, Table 6, Monitor Trends, https://www.epa.gov/air-trends/air-quality-design-values.

020680003	Denali National Park	0.052	0.052	0.053	0.054	0.053	0.050
020900034	Fairbanks, NCORE	_	_	0.046	0.045	0.041	0.043
021700012	Anchorage, Palmer	=	=	=	=	=	0.044

Geography and Meteorology

Another factor for consideration is that Alaska is geographically vast and isolated from any other state in the United States. Alaska is over 586,000 square miles in area and shares no borders with other states.<sup>26</sup> Alaska is bordered to the east by the Yukon Territory and British Columbia, Canada. To the south is the Gulf of Alaska and the Pacific Ocean. To the west is the Bering Sea, Bering Strait, and Chukchi Sea. The Arctic Ocean lies to the north. Alaska is distant from the nonattainment and maintenance receptors identified in the EPA's March 2018 memorandum. The closest identified nonattainment receptor is in Sacramento, California (Site ID 60675003) and the closest identified maintenance receptor is also in Sacramento (Site ID 60670012). California is over 1000 miles from Alaska's southernmost border and the intervening topography in Alaska and British Columbia, Canada are varied and includes mountainous and complex terrain.<sup>27</sup> Geographically situated between Alaska and California are the states of Washington and Oregon. Each intervening state has equivalent or higher ozone precursor emissions compared to Alaska, 28 and each has been determined by the EPA to contribute less than 1 percent to identified receptors in any other state, including California.<sup>29</sup>

Meteorology is also a factor that can limit potential transport of emissions from Alaska to

<sup>&</sup>lt;sup>26</sup> 2015Alaska Air Quality Monitoring Network Assessment, p. 8, published at http://dec.alaska.gov/air/airmonitoring/network-assessments. <sup>27</sup> Ibid, p. 10.

<sup>&</sup>lt;sup>28</sup> See "Table 1: 2014 NEI Stationary and Mobile Source NOx and VOC Emissions (tons)" in the preceding

<sup>&</sup>lt;sup>29</sup> Washington and Oregon's modeled contribution to the Sacramento nonattainment receptor (Site ID 60675003) is 0.14 ppb and 0.45 ppb, respectively. Washington and Oregon's modeled contribution to the Sacramento maintenance receptor (Site ID 60670012) is 0.20 ppb and 0.57 ppb, respectively. See March 2018 memorandum, attachment C.

identified receptors. According to Alaska's submission and the 2015 Alaska Air Quality

Monitoring Network Assessment, weather in Alaska during the summer months is influenced by
the jet stream and low-pressure systems that tend to move weather patterns from south-central
Alaska up into the Interior, not south to the contiguous United States.<sup>30</sup> The summer months are
when ozone levels are generally higher, and that holds true at the Sacramento, California
nonattainment and maintenance receptors, which are those EPA-identified receptors closest to
Alaska, discussed in the previous paragraph.<sup>31</sup>

#### Alaska SIP

It is helpful to review a state's existing SIP-approved regulations as part of a weight of evidence analysis. Therefore, we have evaluated the current federally-approved Alaska SIP and those rules in the SIP that are designed to limit emissions of NOx and VOCs from existing and future sources. Alaska generally regulates emissions of NOx and VOCs through its SIP-approved stationary source preconstruction permitting programs, set forth in Articles 3 and 5 of 18 AAC 50, in addition to other regulations approved into the SIP and described in this section. Stationary source preconstruction permitting is known as new source review (NSR) and establishes requirements based on a source's size and location, among other things. New and modified major stationary sources located in designated nonattainment areas are subject to nonattainment NSR permitting requirements (NNSR) for the nonattainment pollutant. New and modified major stationary sources in designated attainment and unclassifiable areas are subject to prevention of significant deterioration permitting requirements (PSD). Alaska's SIP approved NNSR and PSD

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<sup>&</sup>lt;sup>30</sup> Ibid, p. 23.

<sup>&</sup>lt;sup>31</sup> The high ozone season is May through October in the Sacramento area. Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress plan, Chapter 1, page 1-1, which can be found at http://www.airquality.org/businesses/air-quality-plans/federal-planning.

programs are found in Article 3 of 18 AAC 50. Minor new and modified stationary sources are regulated by Alaska's SIP-approved minor NSR program found in Article 5 of 18 AAC 50.

All of Alaska is designated "attainment/unclassifiable" for the 2015 ozone NAAQS.<sup>32</sup>
Therefore, with respect to ozone precursor emissions, stationary sources seeking to construct or modify in Alaska are subject to PSD and minor NSR, depending on the size of the source. The Alaska PSD permitting program in Article 3 of 18 AAC 50 references a suite of regulations approved into the Alaska SIP and makes use of certain federal PSD requirements, set forth in the Code of Federal Regulations (CFR), and incorporated by reference into the Alaska SIP in 18 AAC 50.040. See 40 CFR 52.96. The EPA most recently approved updates and revisions to the Alaska PSD permitting program on August 28, 2017 (82 FR 40712). The current SIP-approved Alaska PSD permitting program incorporates by reference specific federal requirements in 40 CFR 52.21, 40 CFR 51.166, and 40 CFR part 51, Appendix W, as of July 1, 2017. The program has been updated for the 2015 ozone NAAQS and regulates NOx and VOCs as precursors to ozone formation, consistent with the EPA's implementing regulations at 40 CFR 51.166.

Turning to minor sources, Article 5 of 18 AAC 50 requires pre-construction permitting for subject new and modified minor stationary sources. SIP-approved minor NSR programs and revisions to such programs must be consistent with the EPA's implementing regulations at 40 CFR 51.160 through 51.164. Alaska's minor NSR program was originally approved into the Alaska SIP on July 5, 1983 (48 FR 30623). We have approved subsequent revisions, most recently on August 28, 2017 (82 FR 40712). Both Alaska's PSD and minor NSR programs are designed to limit potential future emissions of NOx and VOCs.

<sup>32</sup> 40 CFR 81.302.

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In addition to permitting requirements, Alaska's SIP contains other rules that also serve to limit NOx and VOCs. These rules include incinerator emission standards (18 AAC 50.050) and emission limits for industrial processes and fuel burning equipment (18 AAC 50.055).

Based on the factors evaluated and discussed in this proposal and supporting material in the docket for this action, the EPA believes it is reasonable to conclude that emissions from Alaska are not likely to be linked to nonattainment and maintenance receptors in the contiguous United States. We propose to find that Alaska's SIP contains adequate provisions that are designed to limit future potential NOx and VOC emissions, and therefore, the state is unlikely to be linked to downwind receptors in the future. Accordingly, we have stopped our evaluation at step 2 of the four-step framework.

# IV. Proposed Action

As discussed in section II in this preamble, Alaska concluded that emissions from sources in the state will not significantly contribute to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in any other state. The EPA's evaluation, discussed in section III in this preamble, confirms this finding. We are proposing to approve the Alaska SIP as meeting CAA section 110(a)(2)(D)(i)(I) requirements for the 2015 ozone NAAQS.

# V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided they meet the criteria of the CAA. Accordingly, this proposed action merely approves state law as meeting federal requirements and does not impose additional requirements beyond

those imposed by state law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork
   Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because it does not involve technical

standards; and

 Does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

# List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 et seq.

Dated: May 21, 2019.

Chris Hladick, Regional Administrator, Region 10.

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